

**CALIFORNIA ENERGY COMMISSION**  
**Peak Load Reduction Program**  
**Real-Time Meters Program Summary**

**Program Participants:**

- eMeter Corporation/Pacific Gas & Electric
- Los Angeles Department of Water and Power
- Northern California Power Agency
- Sacramento Municipal Utility District
- San Diego Gas & Electric Company
- Southern California Edison
- Southern California Public Power Authority

**Project Description:**

Installation of real time electric meters and associated communications systems throughout the state, enabling customers to regularly view hourly energy use profiles.

With the exception of San Diego Gas & Electric participants, the program was available to commercial and industrial customers with peak demands greater than 200 kilowatts. The San Diego Gas & Electric program was available to commercial and industrial customers with peak demands greater than 300 kilowatts.



Electronic interval meters from various manufacturers were installed, including Siemens S4, General Electric KV, Schlumberger Vectron, ABB, Transdata, and Landis & Gyr. The meters communicate with the utility billing system, either through digital paging, telephone land line, cellular telephone, or a radio frequency transmitter system.

Customers can view their hourly energy use profiles over the Internet on websites developed and maintained by the local utilities. The metering information is used to alter energy usage patterns. With installation of the meters, customers are also eligible to participate in a variety of other programs, depending upon local availability, such as:

- Voluntary demand response or curtailable programs
- Real time rates
- Experimental temperature-dependent rates
- Receipt of estimates of day, week, or month ahead electricity costs and average system electric cost
- Receipt of system power quality alert notifications
- California Energy Commission Demand Response Program

## Funding Details and Project Results:

Program Participants	Funding Award	Peak Demand Reduction Achieved
eMeter Corporation/Pacific Gas & Electric	\$10,277,800	200 MW*
Los Angeles Department of Water and Power	\$4,802,290	107 MW
Northern California Power Agency	\$100,000	1 MW
Sacramento Municipal Utility District	\$420,000	15 MW
San Diego Gas & Electric Company	\$2,403,960	33 MW
Southern California Edison	\$16,800,000	292 MW
Southern California Public Power Authority	\$384,950	9 MW
<b>TOTALS</b>	<b>\$35,189,000</b>	<b>657 MW</b>

(\* Megawatts)

## Lessons Learned:

Extremely strict utility customer confidentiality requirements made obtaining customer usage information for analysis difficult. The confidentiality concerns also complicated working with different city and utility contract approval processes. In some instances, complete meter and communications system installations were more costly than anticipated, and billing infrastructure had to be developed before the meters could be installed.

## Contact Information:

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